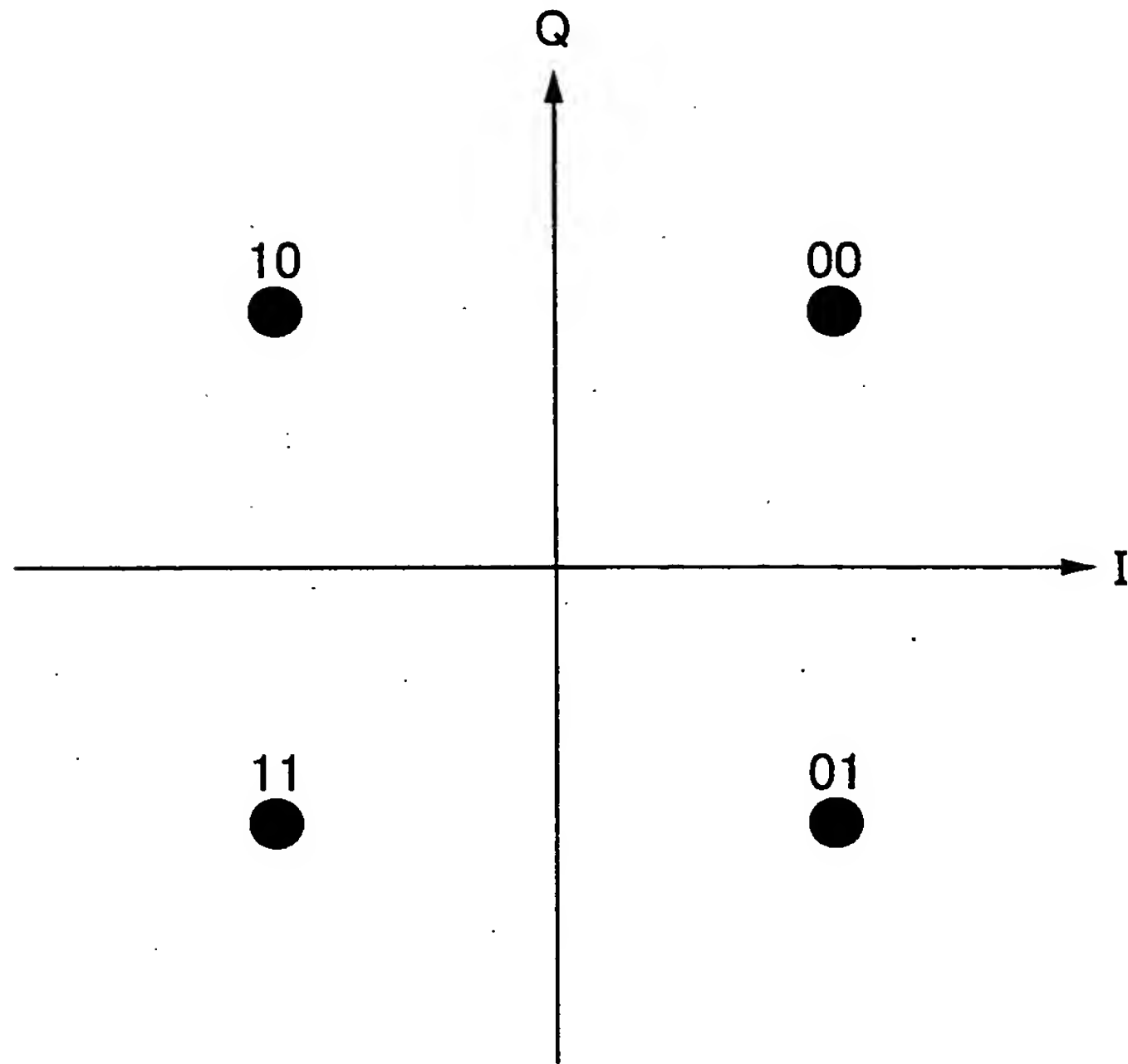


FIG.1



QPSK SIGNAL CONSTELLATION

FIG.2

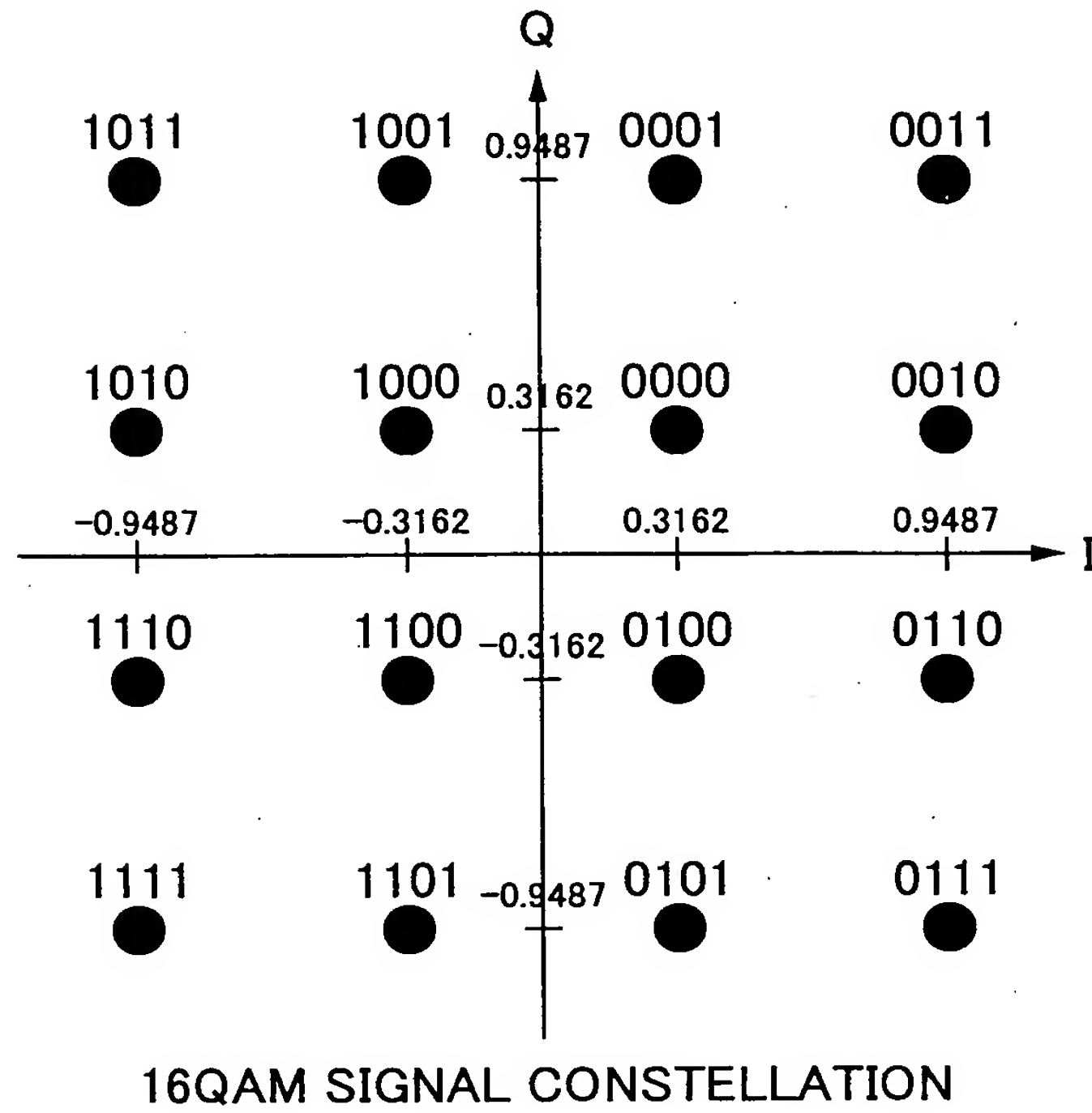


FIG.3

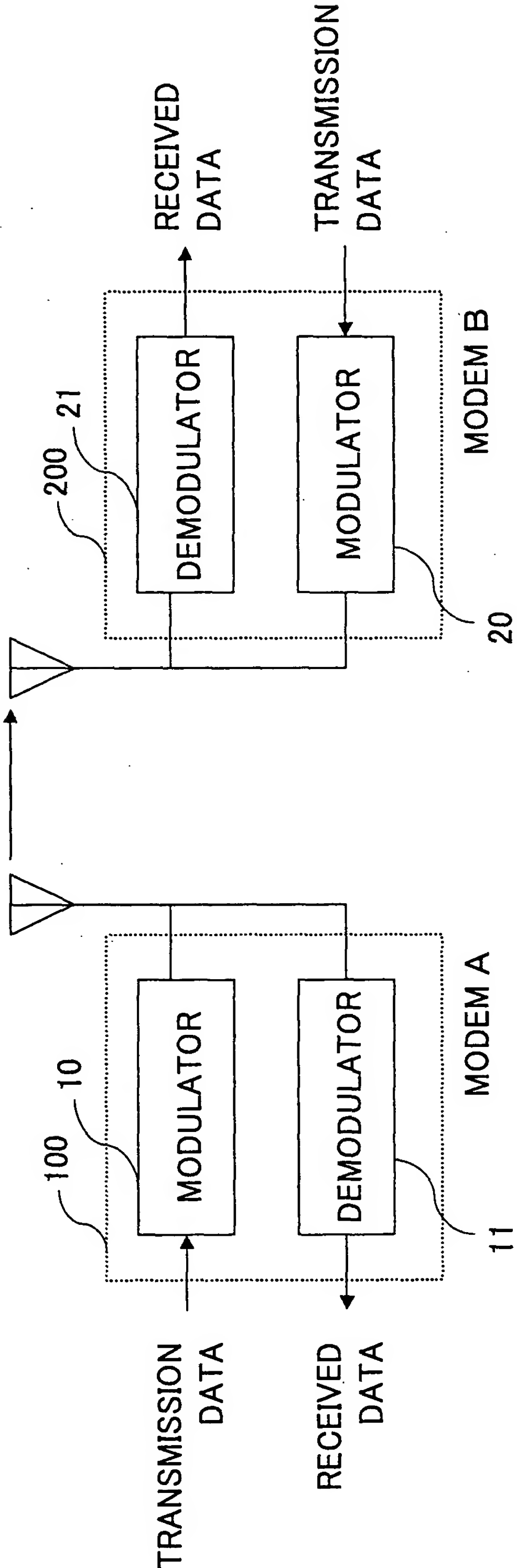


FIG.4

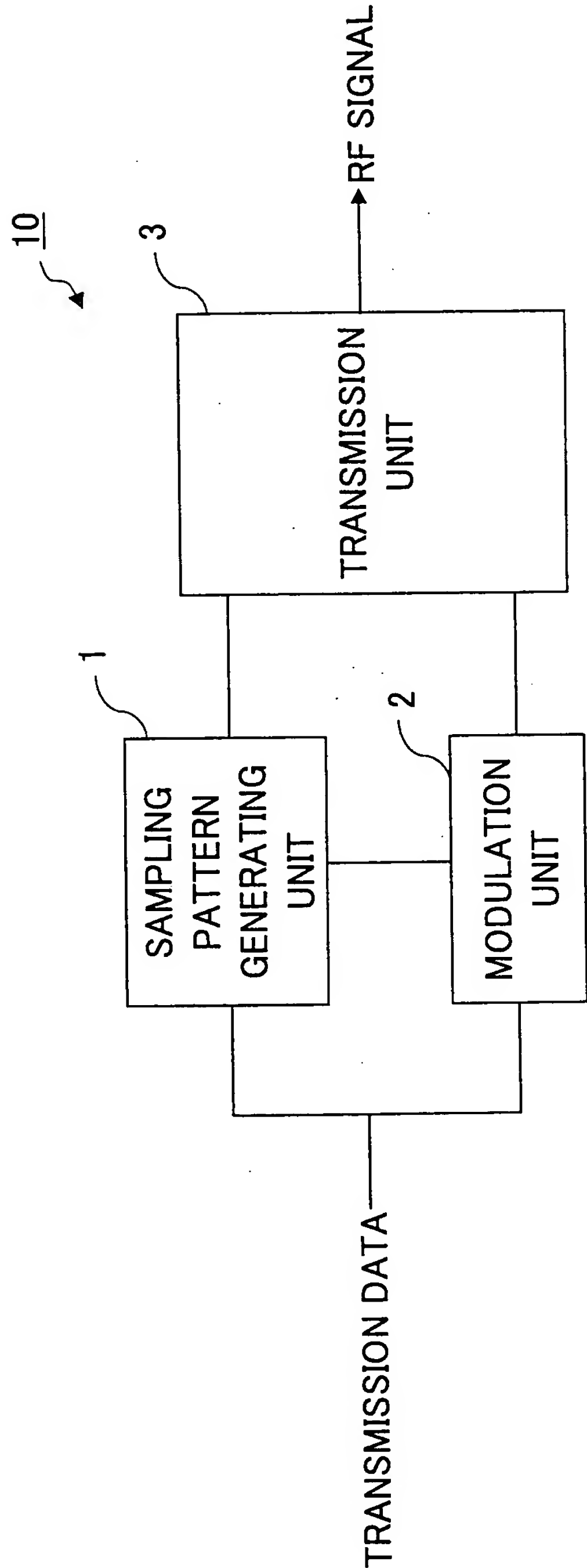


FIG.5

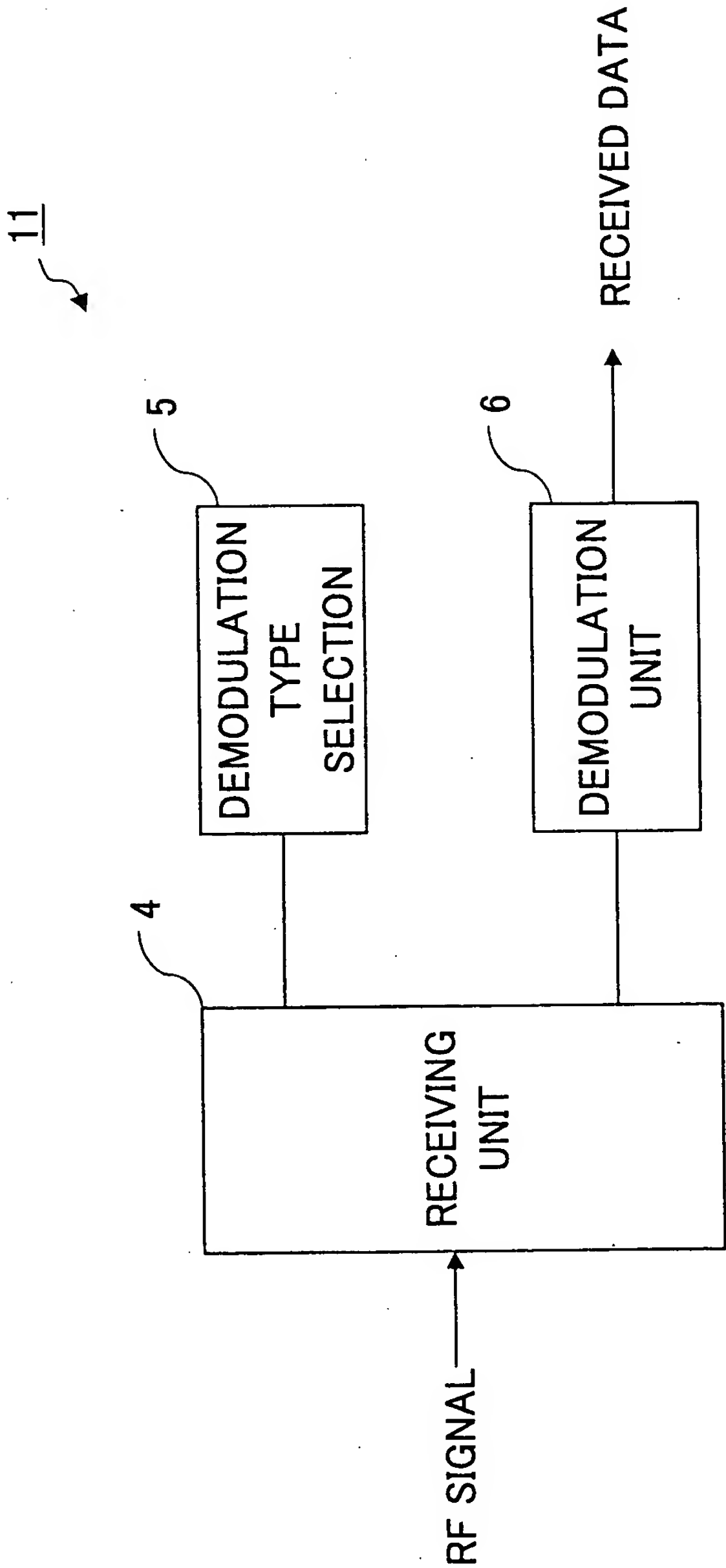


FIG.6

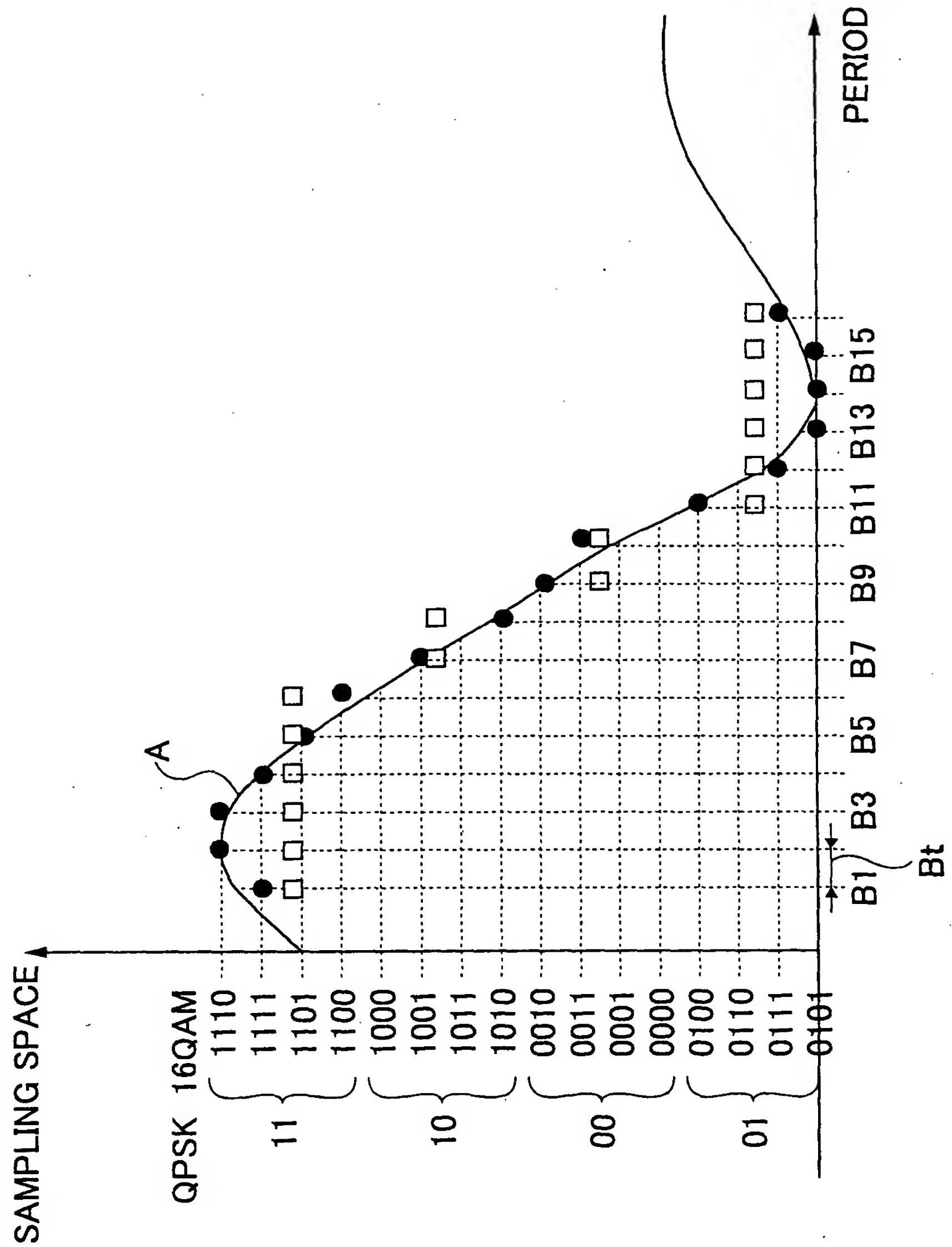


FIG.7

CONSTELLATION POINT	MODULATION SIGNAL
0000	$0.3162+0.3162i$
0001	$0.3162+0.9487i$
0011	$0.9487+0.9487i$
0010	$0.9487+0.3162i$
0110	$0.9487-0.3162i$
0100	$0.3162-0.3162i$
0101	$0.3162-0.9487$
0111	$0.9487-0.9487i$
1111	$-0.9487-0.9487i$
1110	$-0.9487-0.3162i$
1100	$-0.3162-0.3162i$
1101	$-0.3162-0.9487i$
1001	$-0.3162+0.9487i$
1000	$-0.3162+0.3162i$
1010	$-0.9487+0.3162i$
1011	$-0.9487+0.9487i$

FIG.8

SAMPLED DATA	CONSTELLATION POINT	MODULATION SIGNAL
B1	1111	$-0.9487-0.9487i$
B2	1110	$-0.9487-0.3162i$
B3	1110	$-0.9487-0.3162i$
B4	1111	$-0.9487-0.9487i$
B5	1101	$-0.3162-0.9487i$
B6	1100	$-0.3162-0.3162i$
B7	1001	$-0.3162+0.9487i$
B8	1010	$-0.9487+0.3162i$
B9	0010	$0.9487+0.3162i$
B10	0011	$0.9487+0.9487i$
B11	0100	$0.3162-0.3162i$
B12	0111	$0.9487-0.9487i$
B13	0101	$0.3162-0.9487$
B14	0101	$0.3162-0.9487$
B15	0101	$0.3162-0.9487$
B16	0111	$0.9487-0.9487i$



FIG.9

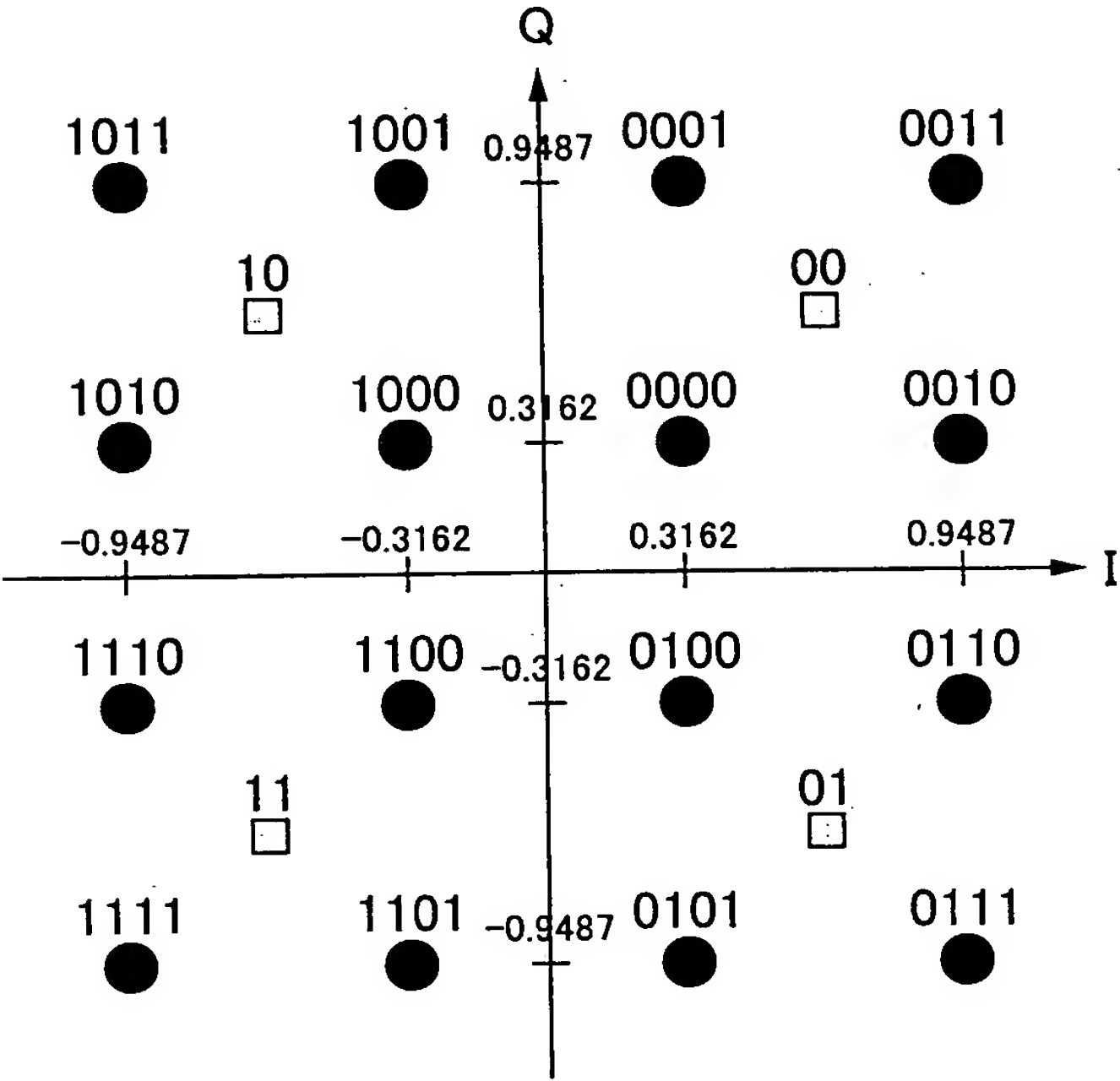


FIG.10

SAMPLED DATA	QPSK DEMODULATION RESULT
B1	11
B2	11
B3	11
B4	11
B5	11
B6	11
B7	10
B8	10
B9	00
B10	00
B11	01
B12	01
B13	01
B14	01
B15	01
B16	01